

SELÇUK BAYRAKTAR

Chairman and Chief Technology Officer, BAYKAR

Selçuk Bayraktar is the architect of Türkiye's first indigenous UCAV systems, the Bayraktar TB3 UCAV—the world's first unmanned aerial vehicle to take off and land on a short-runway vessel—and the KIZILELMA, Türkiye's first unmanned fighter aircraft. In addition to serving as Baykar's Chairman of the Board and Chief Technology Officer, he holds the position of Chairman of the Board of Trustees at the T3 Foundation, the KÜME Foundation, and the CANSAĞLIĞI Foundation.

He completed his primary education at Sarıyer Primary School and graduated from Robert College in 1997. Between 1997 and 2002, he pursued his bachelor's degree in Electronics and Communication Engineering at Istanbul Technical University (ITU). During his undergraduate studies, he was accepted for an internship at the GRASP Laboratory of the University of Pennsylvania (UPenn). Through a scholarship offer received during his internship, he pursued his master's degree in Electrical Engineering at UPenn from 2002 to 2004. During his research, he conducted studies on the world's first UAV formation flight experiments, air-ground robot team coordination, and flight control and guidance systems that led to scientific publications.

Following the completion of his master's degree, he was offered a fully funded master's-doctoral position at MIT (Massachusetts Institute of Technology) in recognition of his outstanding achievements. During his studies at MIT, he focused on automatic flight control algorithms designed to enable aggressive maneuvering capabilities for unmanned helicopter systems. In 2006, he earned his second master's degree

from MIT's Department of Aeronautics and Astronautics. After MIT, he suspended his doctoral studies at the Georgia Institute of Technology (Georgia Tech) and returned to Türkiye in 2007 to lead the indigenous UAV technology development program that had been initiated at Baykar.

At Baykar, he works on the avionics system architecture, flight control and navigation algorithm development, system kinematics and dynamics, electronic hardware, and embedded software development of the company's indigenously developed Unmanned Aerial Vehicle Systems.

Among the programs he has led are Türkiye's first indigenous UAV, the Bayraktar Mini UAV, and the Bayraktar TB2 UCAV—which entered the Turkish Armed Forces (TAF) inventory in 2014, has been exported to 37 countries as of November 2026, and has surpassed 1,250,000 successful flight hours, earning recognition as the world's best in its class. Selçuk Bayraktar and his team also developed the AKINCI UCAV—Türkiye's first strike UAV with a takeoff weight of 6 tons—which was delivered to the TAF in 2021. Having surpassed 150,000 successful flight hours, the AKINCI UCAV has been exported to 16 countries as of November 2026.

He currently leads the development of the Bayraktar TB3—the world's first UCAV to successfully take off and land on a short-runway vessel (November 19, 2024 | TCG Anadolu)—and the KIZILELMA Unmanned Fighter Aircraft, Türkiye's first unmanned fighter aircraft program. KIZILELMA completed its maiden flight on December 14, 2022. Under Selçuk Bayraktar's leadership, the development program achieved formation flights that were unprecedented in global aviation. Moreover, the KIZILELMA successfully conducted the world's first-ever beyond-visual-range air-to-air engagement. As of November 2026, Baykar's indigenously and originally developed platforms have been exported to 40 countries.

In addition to these projects, Selçuk Bayraktar also leads space programs through his technology venture, Fergani. At Fergani Space Technologies, he directs projects for the development of LEO satellite constellations, orbital transfer vehicles, and launch systems.

In response to the COVID-19 pandemic that swept the world in December 2019, he led Türkiye's efforts and directed the development of an indigenous intensive care ventilator. As a result of these efforts, the ventilator produced by BIOSYS, Baykar, ASELSAN, and ARÇELİK was exported and donated by Türkiye to numerous countries around the world. He continues his work in the healthcare field through the CANSAĞLIĞI Foundation (Canan Bayraktar Public Health Foundation), of which he is the founder. As Chairman of the Board of Trustees, he supports research projects by scientists to promote individual and public health.

In recognition of the contribution of Baykar's Bayraktar TB2 UCAVs to the liberation of Karabakh from Armenian occupation, he was awarded the Karabakh Medal of the Republic of Azerbaijan. The Karabakh Medal was presented to Bayraktar by President Ilham Aliyev of Azerbaijan at a ceremony held in Baku on April 1, 2021. In the decree he issued, Aliyev stated that the medal was conferred "for his contributions to strengthening fraternal relations between Azerbaijan and Türkiye in line with the principle of one nation, two states, to developing cooperation, and to ensuring Azerbaijan's territorial integrity and sovereignty."

In 2022, Bayraktar was honored with the Order of Merit of Ukraine by President Volodymyr Zelensky. The decoration was presented on October 2, 2022, by Andriy Yermak, Head of the Office of the President of Ukraine, during his visit to Türkiye.

On April 4, 2023, Bayraktar was decorated with the Military Cooperation Medal by Azerbaijani Minister of

Defense Zakir Hasanov. On October 2, 2023, by presidential decree of Azerbaijan, he was awarded the ASAN Service Medal—conferred by the Azerbaijan Agency for Service and Social Innovation to Citizens (ASAN Service) upon individuals who have made significant contributions to the country.

On October 18, 2023, in recognition of his contributions and services to Mali, he was decorated with the National Order of Mali—the country's highest honor—by President Assimi Goïta.

On February 28, 2024, the National Security and Defense Council of Ukraine awarded him the 1st Class Medal of the National Security and Defense Council of Ukraine for his significant contributions to Ukraine's national security and defense and to the enhancement of its defense capabilities under martial law.

On October 9, 2024, he was honored with the Dank State Order of Kyrgyzstan by President Sadyr Japarov for his contributions to the country's defense capacity and military potential.

At the Turkish Technology Team Foundation (T3 Foundation), which he founded, Selçuk Bayraktar works to enable talented young people and individuals of all age groups to participate in the technology development process.

Within the T3 Foundation, he leads ventures, R&D efforts, and projects aimed at indigenously developing products, systems, and components of high strategic importance in line with global competitive requirements. As Chairman of the Board of Trustees, Bayraktar leads the foundation's scientific programs to realize Türkiye's National Technology Initiative. To instill a nationwide passion for aviation and space—which he considers critical to the National Technology Initiative—he and his team, together with stakeholder institutions, organize TEKNOFEST, Türkiye's first and only aerospace and technology festival. Extending its reach beyond borders, TEKNOFEST was held in Azerbaijan in 2022 and in the Turkish Republic of Northern Cyprus in 2025.

In addition to these responsibilities, he serves as Chairman of the Board of Trustees of the KÜME Foundation (Culture and Heritage Foundation), which he established to address contemporary social challenges by drawing on enduring civilizational values through a holistic examination of human civilization's journey.

Married to Sümeyye Erdoğan Bayraktar since 2016, he is the father of three children. He holds a private pilot's license.

Patents

- Automatic Takeoff and Landing System for Aircraft (Turkish Patent Institute 2015/07928)
- Electromechanical Servo Motor-Controlled Actuator System and Control Method Capable of Detecting Changing Operating Conditions (Turkish Patent Institute 2015/14111)
- Triple-Redundant Flight Control System (Turkish Patent Institute Ref: PT2015-00693)
- ECG Device (Turkish Patent Institute Ref: PT2015-00693)

Scientific Publications

Experimental Cooperative Control of Fixed-Wing Unmanned Aerial Vehicles
S. Bayraktar, G.E. Fainekos, G.J. Pappas
Decision and Control, 2004. CDC. 43rd IEEE Conference on 4, 4292–4298

Synergies in Feature Localization by Air-Ground Robot Teams
B. Grocholsky, S. Bayraktar, V. Kumar, C.J. Taylor, G. Pappas
Experimental Robotics IX, 352–361

Flight Modeling and Experimental Autonomous Hover Control of a Fixed Wing Mini-UAV at High Angle of Attack
H.D. Blauwe, S. Bayraktar, E. Feron, F. Lokumcu
AIAA Guidance, Navigation and Control Conference and Exhibit, 6818

UAV and UGV Collaboration for Active Ground Feature Search and Localization
B. Grocholsky, S. Bayraktar, V. Kumar, G. Pappas
Proc. of the AIAA 3rd "Unmanned Unlimited" Technical Conference

Experiments With Small Helicopter Automated Landings at Unusual Attitudes
S. Bayraktar, E. Feron
arXiv preprint arXiv:0709.1744

Experiments With Small Unmanned Helicopter Nose-Up Landings
S. Bayraktar, E. Feron
Journal of Guidance, Control, and Dynamics 32 (1), 332–337

Hybrid Modeling and Experimental Cooperative Control of Multiple Unmanned Aerial Vehicles
S. Bayraktar, G. Fainekos, G.J. Pappas
Technical Report, Department of CIS, University of Pennsylvania

Aggressive Landing Maneuvers for Unmanned Aerial Vehicles
S. Bayraktar
Massachusetts Institute of Technology

Hybrid Modeling and Experimental Cooperative Control of Multiple Unmanned Aerial Vehicles
S. Bayraktar, G.E. Fainekos, G.J. Pappas

Aggressive Landing Maneuvers for 3-DOF Helicopter UAV
S. Bayraktar, E. Feron
AIAA Guidance, Navigation and Control, Keystone, Colo.

A Novel Mosaic Quality Measurement Method for UAV Surveillance and Remote Sensing
T. Buyukyazi, S. Bayraktar, I. Lazoglu
ISPRS – International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences

Real-Time Image Stabilization and Mosaicking by Using Ground Station CPU in UAV Surveillance
T. Buyukyazi, S. Bayraktar, I. Lazoglu
Proceedings of the IEEE 6th International Conference on Recent Advances in Space Technologies

Real-Time, Hardware Independent Stabilization and Mosaicing in Low Altitude UAV Surveillance
Tolga Büyükyazı, Selçuk Bayraktar, Prof. Dr. İsmail Lazoğlu
Journal of Field Robotics: Special Issue on Low Altitude UAV Flight

Multiple Unmanned Aerial Vehicle Systems Technology: Design and Development Studies
Ömer İnak, Haluk Bayraktar, Selçuk Bayraktar
SAVTEK 2006, METU

Design Features of Bayraktar Mini Unmanned Aerial Vehicle
Haluk Bayraktar, Selçuk Bayraktar, Prof. Dr. Ünver Kaynak
SAVTEK 2006, METU

Bayraktar Mini Unmanned Aerial Vehicle System Components and Performance Analysis
Haluk Bayraktar, Selçuk Bayraktar
HASEM 06, Kayseri

An Unmanned Aircraft Project from Ideal to Reality
Selçuk Bayraktar, Haluk Bayraktar
HITEK 2004 Symposium, Air Force Academy